

parrot consumes nectar obtained from Marri and other Eucalypt blossoms (Robinson, *W.A. Nat.*, 7, 1960: 109-115 and pers. obs.).

This intake of high energy food may be important to the birds for two reasons. Firstly, most at this time of year were associating in pairs and actively selecting suitable nest sites. Energy requirements during the reproductive period for birds in general are greater than at other times of the year (Weiner and Glowacinski, *Condor*, 77, 1975: 233-242) and hence a high carbohydrate food source would assist in meeting these requirements. Secondly, carbohydrate when metabolized produces more heat than either protein or fat. It may thus constitute an important food item in species inhabiting areas which experience low winter temperatures, since several desert species have been found to possess lower metabolic rates and hence lower rates of heat production than more mesic species (Kendeigh and Blem, *Comp. Biochem. Physiol.*, 48A, 1974: 175-187).

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Food of the Western Bower-bird in the Chichester Range, W.A.—

In the course of other work in the Chichester Range I was able to observe a group of Western Bower-birds (*Chlamydera maculata*) over a nine-month period.

The study area is Narrina Gorge in the Pyramid region of the dissected area of the Chichester Range. The gorge is fairly straight, cut into Kyena basalt and is vegetated with open shrubland along the course of the stream. The sides of the gorge are fairly steep, rising to a plateau of spinifex grassland on the tops. The gorge is about five miles long and one group of bower-birds inhabit the whole of it. In 1975 there were four birds in the group. The bower was centrally situated in the gorge, in a spot protected by shrubs from eattle and kangaroos, and also from flooding by its height above the river bed. It was also protected from fire by being in the creek shrubs rather than the spinifex plains.

Observations were made of birds feeding on succulents. Eleven faeces samples were collected and checks were made between the seeds found in the faeces sample and those on the fruiting trees in the gorge. Identification of the plants was verified by the staff of the Western Australian Herbarium in Perth.

Observations began in April and during that month and May the birds were feeding on the fruits of *Securinega melanthesoides*. In June and July they were observed feeding on the fruits of *Amyema benthamii* and the flower buds of *Acacia trachycarpa*. In July they could be seen feeding on three other shrubs: *Trichosanthes cucumerina* (which was also used as a bower object), *Jasminum lineare* (doubtful food) and *Clerodendrium lanceolatum*. The jasmin was not found in the faeces samples but birds were observed pecking at the fruits on the bushes. From August until November the birds spend most of their time feeding on *Ficus platypoda*. This is the food to which much emphasis is given by Serventy & Whittell (*The Birds of Western Australia*, 1967) but my observations indicate that the species is only one of several fruiting plants which are used by bower-birds, although it does seem to be the main food during the wet season. It is interesting to note that some individual *Ficus* plants, one for example growing by Python Pool, will fruit out of season, as early as July, and may provide *Ficus* fruits for the birds at times outside the normal fruiting period of the plant.

With the advent of the wet season *Securinega melanthesoides* fruited and in January 1976 the birds completed the feeding cycle by feeding on this as well as *Ficus platypoda*. No birds were observed feeding on insects.

The above plants are the basic succulents which form the main framework of their diet, around which, with more detailed observations, further variations in feeding could be added.

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